

Application No.: 09/892,543  
Amendment Dated: February 5, 2004  
Reply to Office Action of: December 2, 2003

### REMARKS

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

In amended **Claims 1 and 4**, the alcohol-based solvent, the vapor of which is introduced into the recovery column, is deoxidized in advance of being introduced into said recovery column and an oxygen concentration in the alcohol-based solvent is not more than 60 ppm.

In contrast, Blumberg et al (US 3,513,142) fail to disclose or suggest that the alcohol-based solvent, the vapor of which is introduced into the recovery column, is **deoxidized in advance of being introduced into said recovery column** and an oxygen concentration in this alcohol-based solvent is not more than 60 ppm.

In Blumberg et al, the oxygen content of a monomer stream fed to the polymerization zone is removed (Blumberg et al, col. 2, line 60-col. 3, line 17). However, there is no disclosure of an oxygen content of a solvent used in the recovery of the monomer after the polymerization. The disclosure of Blumberg et al is based on the fact that the patentees discovered that acetaldehyde and similar impurities are not the sole reason for the **undesired coloration** of polyvinyl alcohols. They found that molecular oxygen present **during the polymerization** is responsible for the coloration (Blumberg et al, col. 2, lines 3-6, 35-41 and col. 4, lines 5-17). However, the inventors of the present invention have found that the oxygen contained in the alcohol-based solvent used **when recovering vinyl acetate after the polymerization** contributes to the **visible imperfections such as discoloration, fish**

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**eyes, rough surfaces** (specification, page 1, lines 9-15 and 30-32). Blumberg et al fail to disclose an oxygen content in methanol used in the recovery process and the influence of the oxygen contents on the color of the EVOH product. All they state is that the amount of coloration found in the polyvinyl alcohol will depend in large part upon the extend to which the dissolved oxygen is **removed from the feeds to the polymerizer** (Blumberg et al, col. 4, lines 43-46).

The methanol used in the recovery process has no direct relationship with the production of the PVAc-based polymer. As claimed in Claims 1 and 4, a solution containing said ethylene-vinyl acetate copolymer is introduced into a recovery column and **a vapor of an alcohol-based solvent is introduced into said recovery column**. The fact that a material having no direct relationship with the polymerization affects on the physical properties (e.g., appearance) of the product has not been found until the present invention, and thus it is not obvious for any persons skilled in the art from the cited references.

In addition a **comparison between Examples 1 and 2 and Comparative Example 1** of the specification shows that when the **solvent used during the recovery is deoxidized** (Examples 1 and 2 with oxygen concentration of 10 and 20 ppm), a white product with a **low yellow index of 9 and 13** was obtained. On the other hand, in **Comparative Example 1**, the **methanol fed to the recovery column was not deoxidized** (oxygen concentration of 80 ppm) and a yellowish product with a yellow index of 20 was obtained. Thus, **the use of the deoxidized solvent in the recovery process results in a superior product**. This is not disclosed or suggested by the reference.

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Therefore, the rejection of Claims 1-15 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Blumberg et al (US 3,513,142) and the rejection of Claims 16-18 under 35 U.S.C. §103(a) as being unpatentable over Blumberg et al (US 3,513,142) are believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of these rejections is respectfully requested.

The rejection of Claims 1-18 under 35 U.S.C. §112, 2<sup>nd</sup> paragraph, is obviated by the amendment of Claims 1 and 4.

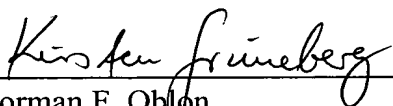
Withdrawn Claims 19 and 20 have been canceled.

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Applicants submit that the present application is now in condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

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